

U.S.S.N. 09/848,397

In The Claims

Claim 1. (previously presented) A fuel cell system, comprising:  
hydrogen fuel;

a CO removal system employing non-Faradaic electrochemical  
modification of catalyst activity, the system including -

(a) a working electrode having a catalyst providing rapid  
dynamic response of the removal system over a  
temperature range of 0 to 800 degrees Celsius,

(b) a counter electrode,

(c) an electrolyte between the working electrode and  
counter electrode,

(d) a power source; and

a fuel cell stack.

Claims 2. - 3. (Cancelled)

Claim 4. (previously presented) The fuel cell system of claim 1  
wherein the catalyst is a layer of material formed on the  
working electrode.

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Claims 5. - 9. (Cancelled)

Claim 10. (previously presented) The fuel cell system of claim 1 wherein the power source is a DC battery.

Claim 11. (Cancelled)

Claim 12. (previously presented) The fuel cell system of claim 1, wherein the working electrode and the counter electrode are coupled in series with the power source, such that current flows between the working electrode and the counter electrode.

Claims 13. - 19. (Cancelled)

Claim 20. (previously presented) The fuel cell system of claim 1 wherein the catalyst is selected from the group consisting of -

- (a) Cu/ZnO
- (b) Cu/CuO
- (c) ABO<sub>3</sub>
- (d) zeolite.

Claims 21. - 24. (Cancelled)

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Claim 25. (previously presented) A fuel cell system, comprising:  
a source of a hydrogen fuel;  
a CO removal system using non-Faradaic electrochemical  
modification of catalyst activity; said removal system including a  
working electrode, an electrolyte, a counter electrode, and a  
power source, wherein said working electrode includes a catalyst  
selected from the group consisting of -

- (a) Cu/ZnO
- (b) Cu/CuO
- (c) ABO<sub>3</sub>
- (d) zeolite; and,


a fuel stack.

Claim 26. (currently amended) The fuel cell system of claim 25  
wherein said removal system provides dynamic response over a  
temperature range from 0 to ~~850~~ 800 degrees Celsius.

Claim 27. (previously presented) The fuel cell system of claim  
25 wherein the catalyst is a layer of material formed on the  
working electrode.

Claim 28. (previously presented) The fuel cell system of claim  
25, wherein the power source is a DC battery.

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 Claim 29. (previously presented) The fuel cell system of claim 25, wherein the working electrode and the counter electrode are coupled in series with the power source, such that current flows between the working electrode and the counter electrode.

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